


County of Loudoun

Office of Transportation Services – MSC # 69

MEMORANDUM

**DATE:** January 19, 2010

**TO:** Sophia Fisher, Project Manager, Department of Planning

**FROM:** Norah M. Ocel, E.I.T., Senior Transportation Planner 

**SUBJECT:** **SPEX 2009-0032, SPMI 2009-0010 & CMPT 2009-0011,**  
**Arcola Substation**  
*FIRST REFERRAL*

**Background**

The subject special exception (SPEX) and commission permit (CMPT) request approval to expand an existing utility substation (addition of six (6) new distribution circuits to maintain the capacity of the substation), and the subject minor special exception (SPMI) application requests approval to allow a buffer modification.

The approximately 3.79-acre site is zoned Transitional Residential (TR3LF and TR3UBF) and is located on the east side of Lightridge Farm Road (Route 705), approximately 2.15 miles south of Braddock Road (Route 620/Route 705). A vicinity map is provided as *Attachment 1*. Access is proposed from Lightridge Farm Road.

In its consideration of these applications, the Office of Transportation Services (OTS) reviewed materials received from the Department of Planning on December 1, 2009, including (1) a statement of justification prepared by the Applicant, received on November 30, 2009 by the Planning Department; (2) a traffic statement prepared by Dewberry & Davis, LLC, dated November 19, 2009; and (3) a commission permit/special exception/minor special exception plat (plan set) prepared by Dewberry & Davis, LLC, dated November 20, 2009.

### **Existing, Planned and Programmed Transportation Facilities**

According to the Revised General Plan, the site is located within the Transition Policy Area. Major roadways that serve or are planned to serve the site are described below. OTS review of existing and planned transportation facilities is based on the 2001 Revised Countywide Transportation Plan (2001 Revised CTP) and the 2003 Bicycle & Pedestrian Mobility Master Plan (2003 Bike & Ped Plan).

**Existing Lightridge Farm Road (Route 705)** is a local secondary road. In the vicinity of the site, it consists of two paved travel lanes (each 9-10 feet width) within a 30-foot right-of-way (ROW). North of the site, the roadway is unpaved. Lightridge Farm Road connects Braddock Road (Route 620/705) to the north with Sanders Lane (Route 705) in Prince William County to the south.

According to the 2008 VDOT Daily Traffic Volume Estimates Report, the segment of Lightridge Farm Road between Braddock Road and the Prince William County line was estimated to carry an average daily traffic (AADT) volume of 285 vehicles.

There are currently no bicycle and pedestrian facilities along Lightridge Farm Road.

**Future Northstar Boulevard (Route 659 Relocated) (segment between Braddock Road and the Prince William County line)** is ultimately planned by the 2001 Revised CTP (Page A1-30) to be a six-lane divided (U6M) controlled access minor arterial within a 120-foot ROW. Left- and right-turn lanes are required at all at-grade intersections, with a desirable median crossover spacing of 1,100 feet. Future Northstar Boulevard would follow the same alignment as existing Lightridge Farm Road in the vicinity of the site, and would connect with the planned Route 234 Bypass in Prince William County.

According to the 2003 Bike & Ped Plan, Northstar Boulevard is proposed as a "baseline connecting roadway" along which bicycle and pedestrian facilities are envisioned.

**Future Dulles South Boulevard (segment between Lightridge Farm Road/Future Northstar Boulevard and Gum Spring Road (Existing Route 659))** is planned by the 2001 Revised CTP (Page A1-49) to be a four-lane divided (R4M) controlled access minor collector within a 120-foot ROW. Left- and right-turn lanes are required at all at-grade intersections, with a desirable median crossover spacing of 700 feet. (Dulles South Boulevard is referred to as "Foley Branch Boulevard" in the current draft of the Countywide Transportation Plan).

According to the 2003 Bike & Ped Plan, Dulles South Boulevard is proposed as a "baseline connecting roadway" along which bicycle and pedestrian facilities are envisioned.

### **Trip Generation**

According to the Applicant's submitted traffic statement, the existing substation generates one (1) vehicle trip per month and there will be no additional trips generated as a result of the expansion of the facility.

### **Transportation Comments**

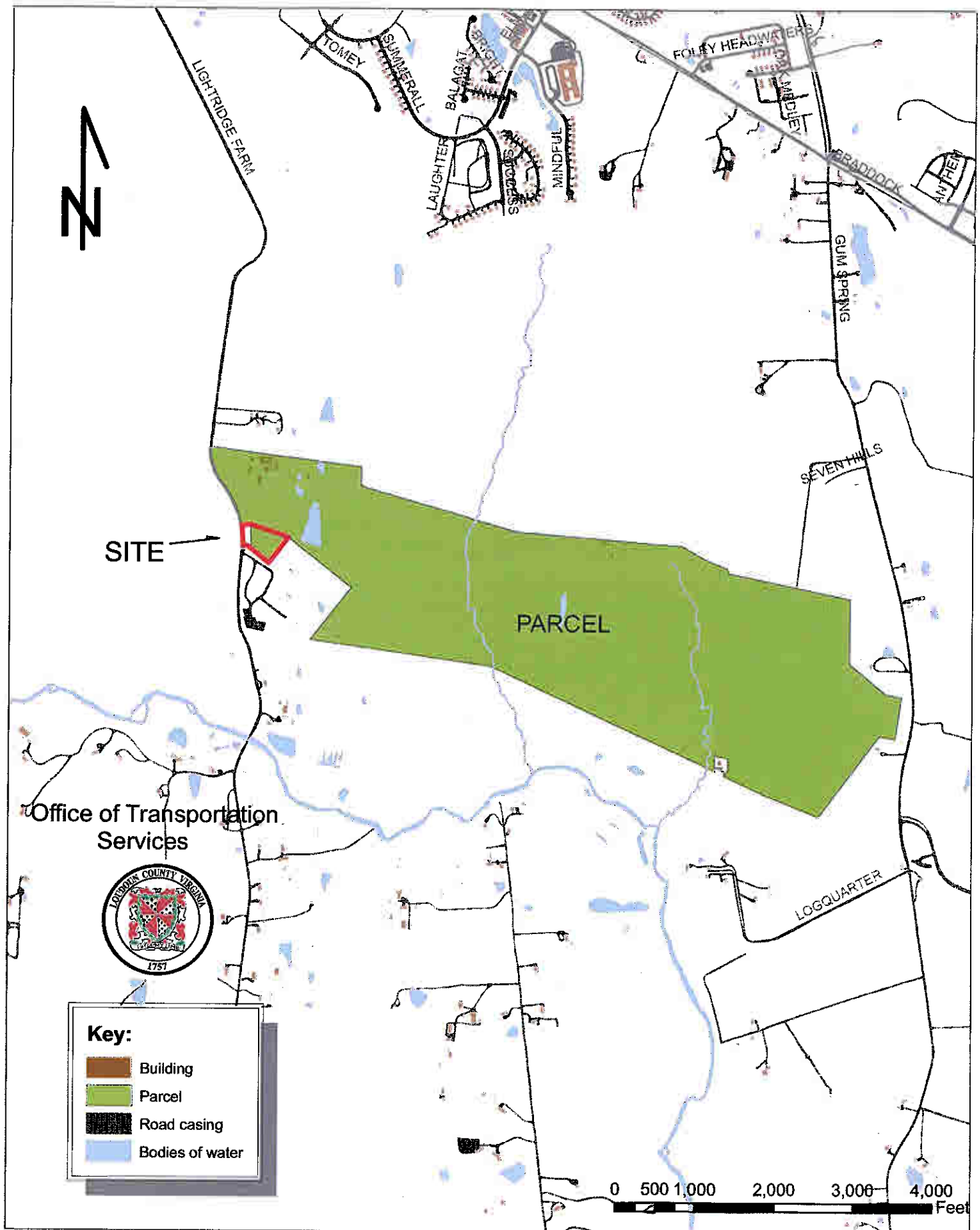
1. The Applicant should indicate whether there will be any changes/modifications to the existing site entrance, and confirm that the entrance meets/will meet applicable VDOT entrance requirements.
2. The Applicant should provide a cross-section of existing Lightridge Farm Road in the vicinity of the site, showing the road's location within the existing ROW. The plat should be revised to clearly depict the location of the existing roadway (including centerline) and ROW boundary along the frontage of the subject site. Depiction of the existing ROW boundary will aid in determining whether any additional ROW for the ultimate location of Northstar Boulevard can be provided along the frontage of the site given the existing substation's close proximity to the existing roadway.
3. According to the 2001 Revised CTP, the planned alignment of Dulles South Boulevard traverses the larger 379-acre property (MCPI # 208-27-0686) owned by South Auburn Limited Partnership, though completely outside of the area subject to these applications. Consideration must be given to the alignment of this planned roadway in future development of the larger parcel.

### **CONCLUSION / RECOMMENDATION**

**OTS will provide a recommendation once the applicant addresses all the comments contained in this referral. Based on the Applicant's responses, OTS may have additional comments on subsequent submissions of this application. OTS staff is available to meet with the applicant regarding this proposal.**

CC. Andrew Beacher, Assistant Director, OTS  
Lou Mosurak, Senior Coordinator, OTS  
Charles Acker, Transportation Operations Engineer, OTS

**ARCOLA SUBSTATION (SPEX 2009-0032, SPMI 2009-0010, and CMPT 2009-0011)**



Attachment 1.

Base Map data obtained from LMIS records (December 2009)